



In recognition of Chevrolet's accomplishments in war equipment output, the coveted Army-Navy "E" flag has been presented to the Chevrolet Gear and Axle Plant in Detroit, an important unit in the nationwide Chevrolet production system that today is dedicated to "Volume for Victory." This distinction comes to Chevrolet for performance—for war production that is only a challenge and an inspiration to an organization serving this nation at war . . . with "Volume for Victory."

CHEVROLET GENERAL MOTORS

WHY YOU SHOULD BUY NEXT SEASON'S INSECTICIDES THIS FALL

No one knows exactly what the conditions will be regarding the manufacture and shipping of insecticides next spring.

The government, of necessity, will have to control allocations of raw materials and metal packages, which are used in the manufacture and shipping of our most needed insecticides and fungicides such as arsenic and copper compounds.

This system of allocations may result in bottlenecks in production, more serious, perhaps, than those experienced this past season. Undoubtedly, there will also be delays in the shipping of insecticides next Spring due to increased wartime congestion on our railroads.

As we said, no one knows exactly what the conditions will be next Spring, but it seems to us that the most sensible thing a grower can do in the face of these uncertainties is to buy next season's insecticides this Fall.

Sherwin-Williams is now producing Arsenate of Lead, and other insecticides and fungicides for the fruit growing field, in quantities sufficient to take care of our customers if they will place their orders now through their regular dealers, and then take delivery of the materials this Fall or midwinter as we can ship.

Orders placed with us direct or through our dealers will be listed in the order received and allocations of insecticide materials will be made to cover these commit-

ments.

EARLY WE CAN

Arsenate of Lead
Mulsoid Sulfur
Sulfix Sulfur
Dry Lime Sulfur
Free-Mulsion
Summer Mulsion
Spralastic
Safe-N-Lead
Basi - Cop (Tri - Basic

Shipments of materials ordered will be made in 30, 60 or 90 days from date of order, and we urge our customers to store such materials over winter on their own farms. By doing this you will be assured of having necessary spray materials when and as needed next Spring and Summer, and will be protected against the danger of a seasonal shortage of insecticides or possible unavoidable delays in shipping.

Sherwin-Williams urges growers to order their insecticides now as the most sensible way of protecting themselves against possible shortages of materials and transportation next Spring.

If you desire further information regarding supplies and deliveries of spraying and dusting materials, write at once to the Insecticide Department, The Sherwin-Williams Company, Cleveland, Obio

Copper Sulfate)

THE SHERWIN-WILLIAMS CO.



SEE FOR YOURSELF IN THE NEWS

HOW PROFITABLE IT IS TO TREAT EVERY TREE

This is what Transplantone treatment does on apples.





Untreated





WITH

BEFORE SETTING OUT

These pictures tell a profit story for every fruit grower. The apple trees in photographs 1, 2, 3 and 4 are the same age from graft-are the same variety and were grown in the same soil. The only difference is that the trees shown in No. 1 and No. 3 were soaked in TRANSPLANTONE solution for 24 hours before setting out. Those in No. 2 and No. 4 were not treated.

The difference is more than size. It is also the superiority of root system, increased vigor and top structure for rapid growth and early bearing.

Which of these trees are apt to make you the quickest profit?

With labor scarce and expensive you cannot afford planting failures. TRANS-PLANTONE insures growth and early bearing giving you production while demand for fruit continues.

TREAT ALL NURSERY STOCK

The same hormone and vitamin stimulus that produced these superior apple trees can be applied equally successfully to all your nursery stock. TRANSPLANTONE increases roots, helps produce stronger and earlier maturing trees. Soak the roots before planting.

Do not delay and order your supply of TRANSPLANTONE so you will have it when you need it.

> 3-oz. can-\$1.00 1-lb. can-\$4.00

(One pound makes 160 to 1600 gallons of solution for transplanting)

Write for further information.

AMERICAN CHEMICAL PAINT COMPANY Horticultural Division, AF-4, Ambler, Pa.

Please send me 3 oz. can of TRANSPLANTONE, for which money is en	nclosed.
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CITYSTATE

SAMUEL FRASER



The recent suc-cessful convention of the International Apple Association is a tribute to Sam Fraser, who is carrying on the effective work in the last 30 years of R. G. Phillips, former secre-tary. Fraser knows the apple business, has a wide acquaintance among fruit growers and horticultural leaders and

is particularly well qualified to represent the Association in Washington and protect the interest of its members in these days of rapid changes. The International Apple Association has a right to expect great things from Samuel Fraser.

DR. WILLIAM H. MARTIN

Dr. William H. Martin, Dean of the N. I. College of Agriculture and Director of the Agricultural Experiment Station, has been

appointed as con-sultant of agricultural chemicals to the War Production Board on a part time basis. Dr. Martin will retain active direction of the New Jersey agricultural institutions which he has been heading since the demise of Dr. Jacob G. Lipman

The appointment was tendered Dr.



WILLIAM H. MARTIN

Martin by Donald M. Nelson, chairman of WPB, and his task will be to assist in the allocation of nitrogen and other strategical chemicals and yet to maintain agricultural efficiency in re-leasing these critical materials vital to the war effort.

NATE L. ALLEN

N. L. "Nate" Allen, well known general manager of the American National Cooperative Exchange, New York City, has been



NATE L. ALLEN

dustry.

appointed consultant to the War Production Board on fresh fruit and vegetables. Mr. Allen, serving as a \$1 a year execu-tive, will not relinquish his cooperative position, but will spend the greater part of his time in Washington.

As consultant, Mr. Allen will actually serve as top man in the fresh fruit and vegetable section of

WPB's Food Division. Mr. Allen has had more than 20 years experience in agricultural products and probably has a wider acquaintance throughout the United States and Canada among agricultural public agencies and commercial circles than almost any other man in the in-

OCTOBER, 1942



THE AUTOMOBILE DEALER

MAVE you thought much about your automobile or truck dealer recently? Have you tried to understand the great problems he faces? Cars and trucks, yes, even repair parts, are as scarce as hen's teeth. Yet it is the dealer's job to a large extent to keep automotive equipment rolling. Your dealer has done your repair jobs by keeping a large amount of his capital tied up in repair parts. He has done your rush jobs without complaint and has given you valuable advice concerning operation and maintenance. William E. Holler of the Chevrolet Motor Car Company in his pamphlet "The Automobile Dealer" reports that 6000 cars and 1000 trucks are standing idle each day awaiting repairs. The dealer's job is to get those cars and trucks back on the road as soon as possible. We cannot afford to lose this valuable local service. Think what it would mean to have to send to the factory for parts and the loss of time to rolling equipment of which there is a shortage already. AMERICAN FRUIT GROWER suggests to all growers that an effort be made to help the dealer through the present crisis. The automobile dealer is an important cog in our transportation system and deserves our consideration. and patience.

TRUCKS ENROLLED IN NATIONAL DEFENSE

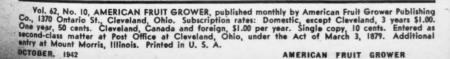
UNDER a sweeping order recently issued by Director Joseph B. Eastman, of the Office of Defense Transportation, all commercial motor vehicles in the United States will become virtually part of the national defense system. They must, beginning November 15, be provided with "Certificates of War Necessity" by authority of which they will be able to obtain gasoline, tires, and repair parts.

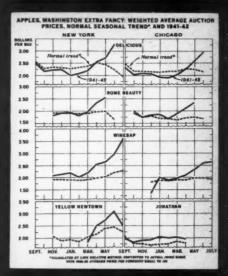
Certificates of War Necessity will be granted only on application blanks which will be mailed to truck operators, including fruit farm owners of motor trucks. You will not be permitted to buy tires and other necessities, unless your trucks are provided with certificates.

Drastic as this order is, we know fruit growers will cooperate fully "in line of duty" operating their trucks with greatest care and economy, for fruit, as a food, is vital to the health of the nation.

35 MILES PER HOUR!

WE are going to drive our motor cars at 35 miles an hour and like it. We are going to like it, because it was one of the important recommendations recently made in the "rubber report" of the Baruch committee. We liked the Baruch report—even though it made us flinch a little—because it was the first four-square statement that has been made to the American public on our badly gummed-up rubber situation. The report tells us that by being careful our military needs for rubber will be met. That being the case, we'll all be careful as a patriotic duty. We'll be careful because the Baruch report is honest enough to say that "if the synthetic rubber production now planned comes through on schedule, we can get through the next two tight years, but without adequate reserves against contingencies and with no provision for civilian cars except on a limited retread and very modest replacement basis. Fruit growers like all other patriotic Americans will drive carefully from now on because finally we've been told the truth about our rubber mess, in a report that says we must save in every way; use every productive facility; and last but not least, that we're not going to switch programs in midstream.





"MY COUNTRY TIS OF THEE"

COMMERCIAL apple production for the 1942 season is now placed at 126,131,000 bushels—3 percent larger than in 1941, when 122,059,000 bushels were produced, and 2 percent above the 6-year (1934-39) average production of 123,798,000 bushels, according to the latest U.S.D.A. Crop Report.

FARMERS are now able to buy new farm machinery only through certificacomposed of the county AAA chair-Board. An order has been issued freezdealers on September 17, as farm machinery rationing has been delegated to the Secretary of Agriculture. Rationing committees are now being

fruit growers, including sprayers, spraypumps, dusters, deep well and shallow pumps, field and garden tractors, fer-

SULFANILAM!DE, which has made laboratory experiments did not prove satisfactory for codling moth. The codling moth, which has been

accused of having developed a cast



CALENDAR OF COMING MEETINGS and EXHIBITS

Nov. 12-13—Iowa State Horticultural Society 77th annual meeting, Iowa Fruit Growers' Association 31st annual meeting, 31st meeting of the Iowa Beekeepers' Association, Iowa Nut Growers' Association, and the Little Mid-West Horticultural Exposition staged by the horticultural students of Iowa State College, Iowa State College, Ames.—R. S. Herrick, Sec'y, Des Moines.

Nov. 17-18—New Hampshire Horticultural Society annual meeting, Hotel Carpenter, Manchester.—Alfred L. French, Sec'y, Concord.

Nov. 17-18—Annual convention of the Wisconsin State Horticultural Society, Fort Atkinson.—H. J. Rahmlow, Sec'y, Madison

Dec. 1-3—Michigan State Horticultural Society, Civic Auditorium, Grand Rapids. —H. D. Hootman, Sec'y, East Lansing.

Dec. 1-3—Annual meeting of the New Jersey State Horticultural Society, Walt Whitman Hotel, Camden.—Arthur J. Farley, Sec'y, New Brunswick.

Dec. 3-4—Kansas State Horticultural Society annual meeting, Manhattan. The Kansas nurserymen will meet in conjunction.—Geo. W. Kinkead, Sec'y, Topeka.

Dec. 4-5—Montana Horticultural Society annual meeting, Orchard Homes, Missoula.—George L. Knight, Sec'y, Missoula.

Dec. 8-9—Connecticut Pomological Society, Garde Hotel, Hartford.—H. A. Rollins, Fruit Specialist, Storrs.

Dec. 8-9—The Western Nut Growers' Association, which includes the walnut and filbert growers of Washington, Oregon, and British Columbia, will hold its annual meeting at McMinnville, Oregon.—O. T. McWhorter, Sec'y-treas., Corvallis.

Dec. 8-10—Virginia State Horticultural Society 47th annual meeting, Stonewall Jackson Hotel, Staunton.—W. S. Campfield, Sec'y, Staunton.

Dec. 9-11—Peninsula Horticultural Society, Dover, Delaware, on 9th and 10th. On 11th meeting will be held in lower part of Peninsula.—T. F. Manns, Sec'y, Newark.

Dec. 11-12—The annual meeting of Oregon State Horticultural Society, Hood River.

—O. T. McWhorter, Sec'y-treas.—Corvallis

Dec. 14—Missouri Horticultural Society annual meeting, Hannibal. Will-adjourn to attend Illinois Horticultural Society meeting on 15th and 16th in Quincy, Illinois.

Dec. 14-16—87th annual convention of Illinois Horticultural Society, Quincy, in connection with the national meeting of the American Pomological Society.—C. C. Mast, Sec'y, Quincy.

Dec. 14-16—Washington State Horticultural Society 38th annual meeting, Wenatchee.—John C. Snyder, Extension Horticulturist, Pullman.

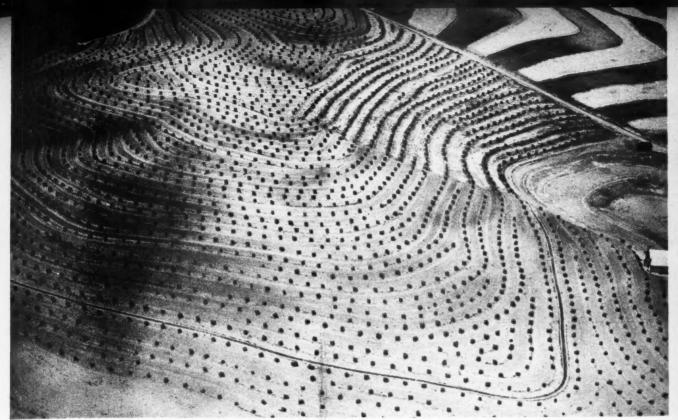
Dec. 17-18—Annual meeting of the Indiana Horticultural Society, Severin Hotel, Indianapolis. — Monroe McCown, Sec'y, Lafayette.

Jan. 6-7—Annual meeting of Maryland State Horticultural Society, Hagerstown. Subject to change.—A. F. Vierheller, Extension Horticulturist.

(Continued on page 18)

OCTOBER, 1942

AUTILISTS SOON



Where erosion must be considered, modern planting programs call for the use of the contour system.

A MODERN PLANTING PROGRAM

MANY fruit growers have wondered what to do in the management of their orchards which would protect their investment and meet conditions caused by post war changes. With severe shortages of labor, restrictions in vital supplies and unsettled markets growers are compelled to devote all their attention to completing each day's work and find little time to look ahead.

This is, however, no time to stop planning for the future for time will prove, as it has so often in the past, that the fruit grower with vision will succeed where others fail. What then should the fruit grower do in the operation of his orchards which will protect him in 1947 or 1952.

In an effort to learn the plans of thoughtful fruit growers, AMERICAN FRUIT GROWER magazine asked many leading growers this question. One of them dramatically pointed to the first Russian five-year plan which has today enabled that country to withstand the German invasion. He contrasted Russia today with the military weakness of that country in the first World War. He urges every grower to adopt a five-year orchard plan with a definite goal for each year. It must be practical and within the resources of labor and capital of the grower but once the decision has been made it should be carried out on schedule. Perhaps the most puzzling question confronting growers is whether to plant more trees and gradually expand the planting and orchard operation.

In the opinion of John E. Rice, suc-OCTOBER, 1942

By JONAS HOWARD

cessful Massachusetts grower, planting is the most important task before fruit growers even though it does not necessarily mean planting for expansion. Rice has observed the rise and fall of many famous fruit belts and in every case the supremacy of one district over another has resulted from an intelligent or neglected planting program. The great New England area made its reputation in the planting of young McIntosh orchards. The Northwest now holds the leadership which was gained through the planting of young trees. Young trees, in the opinion of Rice, will elevate one district above the other and to keep an orchard young at least 25% of its trees should be non-bearing. Planting to keep an orchard young and vigorous is as important as the development of young men in a business. The last Federal census proves conclusively that intelligent planting and planning is not being carried on by fruit growers. Both the number of bearing and non-bearing trees have declined. Non-bearing trees have decreased as much as 50% in the last ten years. According to John E. Rice every aspiring fruit section should have 25% non-bearing trees and no district has ever gained supremacy with trees more than 30 years old. Unless New England begins to plant young trees, its position as a great fruit district is threatened.

The planting of young trees brings

with it the selection of improved varieties to meet consumer demand. As one citrus grower pointed out the newer varieties of grapefruit and oranges are being demanded by consumers and resulting in a very definite loss of markets and displacing fruit grown from other citrus belts which have not maintained intelligent planting.

The modern-minded grower setting out new trees is aided by science as never before. Growth and development of new trees today can be speeded up through the use of hormone solutions. These solutions, which contain Vitamin B-1, and other parts of the Vitamin B fraction, plus certain plant hormones, are active in root formation.

Use of a hormone solution on new trees, soaking them in the solution for 24 hours before setting out, not only speeds growth and size, but results in a better root system, increased vigor and top structure which leads to early bearing.

Diversification in new plantings also opens up new opportunities for growers of tree fruits who seek quick profits. The possibilities in this type of diversification are pointed out in this issue on page 11 in an article entitled, "Quick Profits—The Patriotic Way."

The success of any orchard depends on planting wisdom. To cease planting is to stop progress. Plan wisely. Keep young trees of profitable varieties coming along and insure a high orchard income for the years ahead.

PAGE 7

GOING TO MARKET... THE MODERN WAY

With sidewalks piled high with peaches, selling on the Washington Street Market in New York City goes on throughout the night. Lionel No (In white hat) keeps a watchful eye on all transactions protecting the interests of Berks-Lenigh growers.

Here is a step by step, word, and picture account, of how a crop of peaches moves from orchard to consumer.

By ROY C. JAMES

GROWERS in the Berks-Lehigh section of Pennsylvania don't waste any time sending their peaches to market. Picked and packed during the day, the peaches are trucked at night to the Washington Street Market in New York City and are ready for purchase in retail stores the next day.

Berks-Lehigh growers customarily

consign their peaches to commission merchants on the Washington Street Market. In return for selling the fruit, growers pay the commission merchants a 10% commission plus 2c a package handling charges.

The 24 hours while the peaches are being sent to market, handled and sold are perhaps the most important in the life of the peach. Improper handling on trucks and in the market can destroy the quality of the peaches just as arrival on a glutted market can turn a looked-for profit into loss.

Lionel Newcomer, manager of the Berks-Lehigh Cooperative Fruit Growers, usually precedes the peaches to market and checks on the arrival of the peaches and the prices received. Each night he telephones his office in Boyertown, Pennsylvania, to find how many loads are coming up that night. These long distance telephone conversations may last 15 minutes to a half hour as Newcomer jots down the information needed.

All peaches are trucked into the market so that the narrow streets are packed with vehicles. Trucks of all kinds and descriptions are constantly moving through the streets loading and unloading fruit and traffic jams are frequent. Built upon the use of the truck, the market is a testimonial to motor carriers which at one time or another handle practically all of the nation's fruit crop.

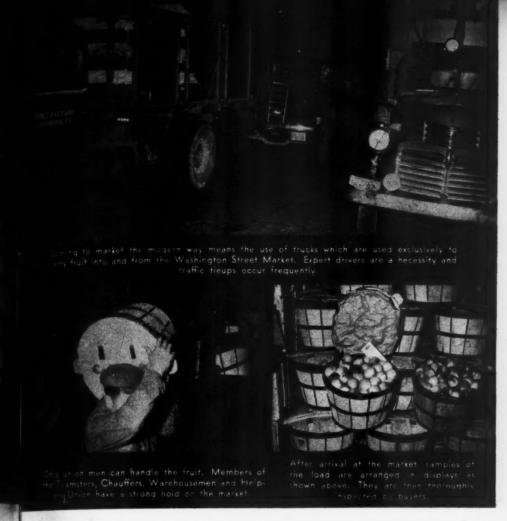
It is one of Newcomer's jobs to see that the fruit is not injured in handling so that it loses value because of

Seller and buyer talk it over trying to agree on a price. If the buyer doesn't like the price he will wait hoping it will fall or try another merchant, In all cases prices are not announced publicly.

SHAMIL PERCES.

THER MC





bruising. All of the handling at the market is done by porters who are so thoroughly banded together into the International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of American Union Local 202 that they can charge exhorbitant prices for unloading fruit. According to Union rule, a truck driver cannot help unload but must stand idle while his truck is being unloaded. He cannot even put the baskets on the tail gate to speed the unloading and if he insists he is liable to have his skull cracked by the union "bouncers." Consequently carrying the fruit from the interior of the truck to the tail gate costs between \$2.70 to \$3.00 a load and to that must be added the cost of carrying the fruit from the truck to

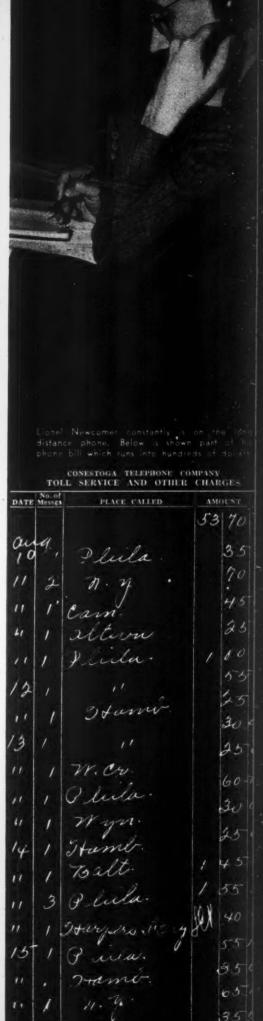
the place of sale. When the commission merchant sells to the jobber or retailer the same process is repeated so that needless handling charges come to be an unreasonably large part of the total cost.

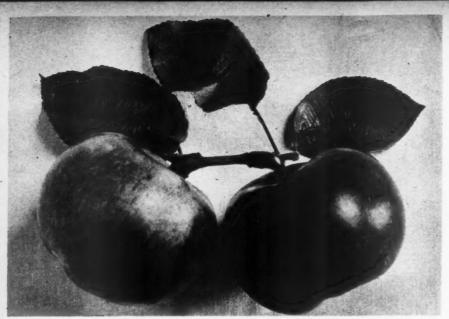
According to Union rule growers driving their own trucks and carrying their own fruit are allowed to help unload their trucks. But in many cases it is difficult to prove these facts to the union men hungry for graft money who will bully the grower into hiring a porter.

The 24 hours the fruit spends from orchard to consumer is chock full of action, the accomplishment of which is a tribute to the truck, the telephone and the marketing system developed over a long period of time.

ong the night. Libhel Newcomer keeps in contact with commission institution make accides have arrived and are being sold at a proper price. By doing this he saves a considerable amount of money for glowers.







The McIntosh apple is by far the leader in the Northeast and shows no signs of relinquishing that lead.

TRENDS IN APPLE PLANTING

By H. B. TUKEY

Chief in Research, New York State Agricultural Experiment Station

NURSERYMEN are having a good year, which is just another way of saying that people are planting. And these plantings are principally of two types, namely, home and garden plantings and commercial orchard plantings. The trend with the first group is towards variety, attractiveness, utility—all with a garden and subsistance point of view. The trend with the second group is towards closer planting, smaller trees, earlier fruiting, rotation orchards, higher color, bland varieties, greater attention to market demands, and a more critical attitude towards varietal adaptation.

To many, the revival of interest in home and garden plantings seems most unfortunate. Wasn't the home orchard of a generation ago a sorry sight? Didn't the poor fruit brought into local markets from neglected orchards raise serious problems with grades and prices? All of that is true, but it must be recognized that these older plantings were really orchard plantings which had been neglected, while the newer plantings are strictly of the home and garden type.

The best advertisement for the apple is a good apple. There is nothing like one good apple to whet the appetite for another. Too many people have grown up with an eye that fails to recognize the apple. An apple tree or two in more backyards in America would be good advertising.

The war has hastened this home and garden interest. The reduction in automobile travel, the increased tempo of factory and office, and the need for a hold on something substantial like Mother Earth, all play a part.

The varieties being planted are, fortunately, of the better kinds, for the most part. In the Northeast it is McIntosh, Delicious, Early McIntosh, Melba, Cortland, Golden Delicious, with a few Wealthy, Yellow Transparent, and Northern Spy thrown in. Some of the newer kinds, as Lodi, Milton, Melba, Lobo, Macoun, and Kendall are of interest, while R. I. Greening and Baldwin go begging. In other parts of the country the choice lies with Stayman, Jonathan, Delicious and its color sports, and Rome and Gallia. As might be expected, dwarf trees and "bearing-age" trees wisely or unwisely are in demand. In the middle West where hardiness is important, the early-fruiting Anoka has been popular, as have Haralson and some of the Iowa Station introductions as Joan and Sharon.

The "three-in-one" and "five-in-one" trees are also of interest. And while one may smile at some of the ideas of these new amateur planters and their hurry-up methods, they deserve consideration and sympathy and helpful guidance. These planters are a potential market for apples from commercial orchards. Time and again the writer has seen the three apples on the little tree in the backyard result in the purchase of apples from the retail store for that applesauce, apple pie, and baked apple that they call to mind.

So much for the home and garden planting. As for commercial orchards, the trend towards closer planting, smaller trees, earlier fruiting, and rotation orchards is all part of the

same idea, namely, trying to produce a better article at a lower price. The increase in labor costs and the shortage of labor only accelerate the trend

One hears discussions of setting trees in hedgerows with trees 20, 25, and 30 feet apart in rows which are 30, 40, and 50 feet apart; of dwarf and semi-dwarf trees; of varieties which have naturally smallish trees, as Rome and Gallia and Cortland: of rotation orchards which fruit and are removed at 30 years of age; of color sports and higher-colored fruits like Starking, Richared, Rogers McIntosh. Red Spy, and Red Gravenstein; of emphasizing market demands and preferences in the selection of varieties, as the McIntosh and Delicious varieties for eastern markets at the expense of Winesap and Stayman and as the Melba, Early McIntosh, and Milton for early roadside trade in place of Yellow Transparent, Early Harvest, Duchess, and Wealthy; and of more care in selecting varieties for suited locations so as to make use of natural advantages that may increase vields, reduce spraying costs, and otherwise lower the cost of production. The use of hardy body stocks, as Virginia Crab in the Middle West where trunk injury is not uncommon, is an example.

The major varieties are McIntosh, Delicious, Starking, Richared, Rome, Gallia, and Jonathan. Winesap is declining in popularity. Cortland and Golden Delicious are on the increase. Lodi, Melba, Early McIntosh, Milton, Macoun, Kendall, Haralson, Joan, Sharon, and Turley are newer sorts which have some support. Baldwin, Ben Davis, Tompkins King, Sutton Beauty, and dozens of "old timers" are fast losing popularity. Oldenburg and Wealthy are now valued only where hardiness is a factor. Grimes still has a place, as have R. I. Greening, Gravenstein, and Twenty Ounce, although no expansion is noted.

The increase in Delicious is one of the trends that has confounded the experts and been difficult to explain. Never rated too high in quality, recognized as not having a wide range, and being considered a variety hard to grow, it has nevertheless forced ahead. Two very strong forces operating to bring this about have been the wide publicity which the variety has enjoyed, and the consumer liking for it.

Whether one likes to believe it or not, advertising is of tremendous importance in the establishment of a variety. No two varieties require the same orchard management or handling methods. Some are subject to scab, some to caustic spray injury, some to finicky harvest demands, some to pollination difficulities, and so on. When a sufficient number of orchardists become interested in a variety

(Continued on page 19)

OCTOBER, 1912

PAGE I



Quick Profits THE PATRIOTIC WAY



DIVERSIFICATION WITH SMALL FRUITS A WINNING PLAN

By DEAN HALLIDAY

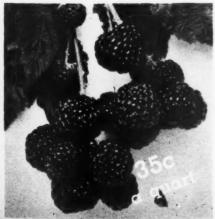


Red raspberries nearly always are a profit crop, bringing 50c a quart at the start of the past season.



Strawberries are adapted to the greatest number of locations and opened the season at 35c a quart.

In areas where they can be counted upon to do well, black raspberries bring as high as 35c per quart.



OCTOBER, 1942

ERE'S a challenge to every fruit grower who is not already applying diversification to his fruit growing

Here is a planting program which is patriotic in its purpose, yet holds the opportunity for QUICK PROF-

Here is a practical planting program which can help us achieve ultimate Victory and prove the truth of Secretary of Agriculture Wickard's statement that, "Food will win the Victory and write the Peace."

Here it is: Let every grower specializing in tree fruits survey his operations and acreage to see if he cannot find time and space for the planting of bramble and bush fruits and strawberries.

This program is suggested for quick production, quick cash profits and a quick, practical way for a grower to come to the aid of his country in the matter of additional food production.

A grower of tree fruits can turn to this small fruit plan for added production during the emergency while he is systematically carrying on an additional planting program of apples, peaches, pears or cherries, looking towards the more distant future.

Aside from the patriotic need of this planting program, there is an economic side to it, and this is not alone concerned with quick profits. That diversification on fruit farms is practicable and profitable is shown by dozens of successful multiple-fruit enterprises in various sections of the country. The reasons for success where materials, labor and supervision costs are spread over more than one crop and where returns cover more than one part of the season, are all tied up in the one fact that an entire year's operations are not centered on one crop which, with adverse weather, pest or market conditions, may prove to be only a "break-even" proposition.

The stories of financial success

with certain small-fruits are often almost fantastic, and we are not advocating such a planting program with the idea that it will prove in every instance to be a get-rich-quick plan. It

(Continued on page 20) AMERICAN FRUIT GROWER



Where they can be grown, blueberries are a real money crop, this year bringing as high as 72c a pint.



Although difficult to handle, boysenberries, at 40c a quart, are moneymakers in areas where easily grown.

In certain markets, blackberries were in steady demand this season and easily brought 29c a quart retail.



PAGE II

SOME FACTORS AFFECTING APPLE MARKET THIS SEASON

By PORTER R. TAYLOR

HE 1942 season appears to be the year that apple growers have hoped for during the past decade when they might have the opportunity to market fruit of good quality from a crop of acreage volume during a period when consumers were enjoying relatively good buying power. But despite the many favorable factors this season, there are problems which must be met before the success of the season can be assured.

The September crop estimate indicates that there will be about three million bushels more than last year if sufficient labor is available to harvest and pack the normal proportion of the crop. Thus, the supply is not excessive and it should be marketed without too much difficulty.

Most growers realize that the major portion of the production is in the eastern part of the country, especially in the populous states from Virginia to New England. In this region a much larger portion of the production is of the winter varieties, the presence of which should lengthen the marketing season as compared with last year. Relatively, the heavy crops are found in New England and in the Appalachian area as compared with more normal production in New York, especially in the western portion.

On the other hand, production is much reduced in the Middle West, with Ohio and Michigan the only states where crops approximate the average in volume. The shortage of production in other parts of this region will make it necessary for the markets in this area to draw on both eastern and far western supplies for a larger part of their consumption requirements than is usually neces-

Washington has a production of about the same volume as last season, providing there is sufficient labor available to harvest all of the crop, which is still uncertain at the time of writing. Oregon is the only coast state with a larger volume than last year, while the production in California is much below the usual amount. With the increased demand for fruit in California, that state will doubtless be required to draw on the Pacific Northwest for a substantial proportion of its supply.

Thus, from a geographical standpoint, we may expect a heavy movement of apples from the eastern states to the central states with a larger proportion of the Northwest fruit being marketed in California.

The chief point of significance with regard to varieties is the high percentage of winter fruit expected in the eastern states, which will lengthen the marketing period providing storage is available in satisfactory amount.

There is one respect in which this season is different than any other year, except 1941, and that is due to the strong market for processed apples, either canned or dried. This situation is caused by war demand, but is welcome even though it cannot be assumed to be permanent. Despite the need to hold canning of apples for commercial outlets to about 1,600,000 cases, and of applesauce to about 1,750,000 cases in order to conserve tin, it seems likely that the total volume processed will be increased for military requirements so that the pack is likely to reach a total of about 6,000,000 cases, or as much as was processed from any previous crop, except that of 1941.

For the first time in years the market for dried apples is ready to take all of the apples offered at prices nearly three times those which prevailed in 1939 when there were few buyers for this product due to the outbreak of the war in Europe. Government reservation orders have been placed on both the stocks and current manufacture of dried apples, and it appears likely that all of this production will be absorbed for government distribution, mostly for Lend-Lease purposes. Steps are also being taken to secure a maximum pack of this fruit, because of the shortage of other dried fruits, especially prunes, the crop of which is appreciably below average volume. While reservation orders have been placed on the six important dried fruits, it is expected that a minor portion of this volume will be released for commercial sales. The volume which will be removed from domestic consumption is likely to approximate 750,000 tons of fresh fruit, creating a vacant space not likely to be filled from any other source.

The absence of shipping to carry apples into former export markets has created a serious problem of apple growers in recent seasons, but this factor will be of some benefit to the industry because the transfer of shipping to other uses has curtailed banana imports to a point where that crop is a distinct luxury in the United States. Apples and oranges should be

substituted for the missing bananas in the millions of lunch boxes in daily use this winter. But apples, to be satisfactory for this use, must be of dessert varieties and of the higher grades. This outlet should absorb many of the McIntosh, Delicious. Stayman, and Jonathan and could be used as an outlet for good quality fruit of the Grimes and other less known varieties which are also satisfactory for dessert purposes.

Citrus competition is likely to increase as the marketing season progresses. There is a good presumption that the combined crop of such fruits may exceed any previous crop. Certainly a greater supply of grapefruit is expected than in any previous year. The marketing of this fruit is likely to be complicated by the shortage of tin, which is likely to restrict the volume of canned product available for commercial sales outside of government requirements. But there will be plenty of grapefruit used in fresh form to compete with apples, regardless of the final decision as to the volume to be processed.

Both Florida and California have good supplies of oranges nearly ready for market so that there will be no likelihood of reduced competition with this important fruit. Present signs point to a reduced supply of California oranges this fall, with an increased volume of Valencias from both Florida and California next spring. Thus, competition from citrus fruits will be reduced this autumn, but become heavier as the season moves toward the winter and spring

Present prospects are for a supply of winter pears of about the same volume as last season, when it was readily marketed. Tangerines will be available in much more abundant supply than from the short crop last season. Each of these fruits also will be competitive for lunch box use.

Last, but by no means least in importance, is the fact that consumer buying power has increased to such a high level that steps are being taken to prevent such an abundance of funds from leading to inflation. Most of this additional income is in the hands of the working class who have always been substantial consumers of apples. So buying power is likely to be more than satisfactory during this marketing season.

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In summary, it appears that apple growers are likely to have at least a reasonably good season providing they are able to solve their labor, package and storage problems without too great cost or wastage, But with the shortage of storage and the increasing citrus competition which is expected as the season progresses, more of the crop than usual should be moved to market during the fall

Grower groups are to be congratu-(Continued on page 17) OCTOBER, 1942

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AMERICAN FRUIT GROWER



In picking remove stems from spur with an upward twisting motion, careful finger pressure on fruit.

Careful picking will go for naught if the picking bag is carelessly emptied and the fruit is bruised.

HANDLING APPLES THROUGH STORAGE

APPLES should be clean, sound, of good color for the variety, and sufficiently mature to continue the ripening process satisfactorily when picked for storage. Fungous diseases, such as apple scab, Brooks' fruit spot, and Bitter Rot, may extend their damage during the storage period. If fruit is bruised or skin torn at handling from any cause, including stem punctures, further loss (as decay) may develop from the common blue mold fungus, Penicillium. If apples are immature in addition to lack of color, they may be susceptible to scald, bitter pit, and shrivelling. If over-mature, losses from bruising, decay, water core, and breakdown are among the hazards. In picking remove stems from spurs with an upward twisting motion with careful finger pressure on fruit. If grabbed and pulled, apples may show finger bruises and many stems are torn out leaving skin breaks.

. Apples grow and increase in size until they are picked or drop. A helpful guide in determining time of picking is the ease of separation of the stem from the spur. Considerable skill is needed to permit the proper amount of red or yellow over-color and greenish or greenish-yellow under-color to develop and pick with sufficient maturity before loss from dropping occurs. Often with mature trees and full crops, it is very desirable to give two or more pickings to take the fruits from the tree as the proper stage of maturity arrives. Multiple pickings increase the yield of picked fruit, improve color, eating quality and storage quality.

Another helpful guide in determining time of picking is to watch the growing season in days from full blossom to first picking date for the variety. A close correlation exists between the number of days from full blossom to first picking date. If growers put down the date when a variety begins to open into full bloom, and a second date when the bulk of the last october. 1942

By FRANK H. BEACH

Extension Horticulturist Ohio State University

blossoms open into full bloom, these can be used in forecasting expected picking dates for the variety.

Weather conditions, of course, influence harvest practices, and often if fruit is to be stored in common storage and the weather is hot, it is desirable to let the apples hang longer than the suggested period, unless drop is serious, as they may keep better on the tree than in common storage at

a higher temperature.

During the last two years growers are testing a new stop-drop pre-harvest spray, such as naphthalene acetic acid, in an attempt to hold apples on the trees long enough to attain higher color and with less loss from drop. Most manufacturers of spray materials prepare one of these hormone sprays and furnish directions for using their material. The tests so far indicate that the summer and early fall varieties as a rule respond better than late varieties. The application is usually made when first drop is noticeable, and if fruit hangs more than a week or ten days after this spray, it may be desirable to repeat the application, especially with varieties very subject to drop, such as McIntosh. The cost of the dilute spray applied is usually about 2c a gallon, and most growers like to have a promising crop of about 10 bushels or more on the mature bearing trees to justify the cost of application and keep the expense down to around 3c a bushel. It is important that the stem of each apple be thoroughly sprayed. Experience is showing that it is best to apply the spray during the warmer portion of the day when the temperature is 75° F. or thereabouts.

Excellent results have been reported with most summer varieties up to and including Wealthy. Many

good results have been secured with McIntosh and Delicious. Results with Jonathan, Stayman, Baldwin and Rome are more variable. Where the first application has been delayed too long, late in the harvest season, particularly if foliage has been injured and weather conditions are hot and dry, the response has been frequently unsatisfactory. Stop-drop sprays are increasing in use, particularly where growers spot pick and want to extend their harvest over a long season to secure the highest possible development of quality and to permit the most efficient use of labor when spot pick-

After apples are picked, they react strikingly to the temperature and humidity in which they are kept. Following are some factors which shorten the number of days from bloom to harvest, and some factors which allow normal or delayed maturity.

Conditions Hastening Maturity

- 1. Trees with light scattering crop.
- 2. Drouth.
- 3. High temperatures.
- 4. Trees in low vigor or with injured or sparse foliage.
 - 5. Frost prior to harvest.

Conditions Delaying Maturity

- 1. Abundant soil moisture.
- 2. Temperatures normal or below.
- 3. Excellent vigor and foliage.
- 4. Use of heavy or late nitrogen fertilizer or manure applications.
 - 5. Late cultivation.

Bruises and cuts greatly impair storage quality and reduce selling prices. Most of the decay developing in storage has its origin in bruises and cuts. The inspection service has found that bruises constitute the most serious damage to fruit in storage

(Continued on page 16)

PAGE 13

STATE NEWS

TENNESSEE-Judge R. B. Cassell of Harriman (pictured below) says it takes elevation to grow apples. His orchard near the 3,000-foot level has never failed a crop and the fruit colors beautifully. He credits a new sprayer for the excellent quality apples this year, and when he couldn't get a man to help, his foreman sprayed the 25-acre orchard

Labor is at a critically low abb, and large orchards are particularly hard hit.

The peach crop was less than a third of

last year's, and prices were correspondingly higher. The influence of the tremendous crop

in the Carolinas kept the average price for U. S. Ones in East Tennessee at \$1.75 and \$2.00 but in the middle and West Tennessee, prices ranged \$.75 to \$1.00 higher.

The executive com-mittee has not as yet reached a decision regarding our annual meeting, but it is ex-pected that it will be held in Nashville, sometime during January .-A. N. Pratt, State Horticulturist, Nashville.

R. B. CASSELL

CONNECTICUT - In spite of the excellent work of the Connecticut Pomological Society's Fruit Farm Labor Committee, composed of Harold M. Rogers of Southington, Chairman, John Lyman of Mid-dlefield and Charles B. Young of Walling-ford, growers are unable to obtain sufficient experienced apple pickers to harvest one of the largest McIntosh apple crops on record. This committee has had excellent cooperation from the U.S. Employment Service, the Agricultural Labor Committee, Yale University, The University of Connecticut and local news-

With favorable weather conditions it is expected that practically all of the Connecticut apple crop will be harvested. Weather conditions caused some loss in early peaches but the main crop was of excellent quality and prices were very satisfactory.—H. A. Rollins, Fruit Specialist, Storrs.

SOUTH DAKOTA—The annual meeting of the State Horticultural Society was held on August 31 and September 1 at Brookings.

Dr. W. H. Alderman of the Minnesota Station, as delegate of the Minnesota Society, introduced the Haralson apple, a large, red, long-keeping apple that has proven hardy over most of Canada, as well as our own states. At present, with the exception of the Wealthy, when raised at an altitude exceeding 4,000 feet, it is the best winter apple for this state.—W. A. Simmons, Sec'y, Sioux. Falls.

INDIANA-The Indiana apple harvest is well under way with the harvesting of Grimes and Jonathan having started from five to ten days earlier than normal in various areas of the state. The quality of the crop is very good and size is exceptional as a result of which,

crop estimates have gradually increased.

The fruit growers of Indiana are deeply appreciative of the fine cooperation of Dr. T. Malan, Superintendent of Public Instruction, and of local school officials through whom the release of students for fruit har-

vest has been made possible.

To compensate for the cancellation of the annual meeting of the Indiana Berry Growers' Association, an increased number of local meetings will be held in the commercial counties of Indiana.-Monroe McCown, Sec'y, La-

WASHINGTON, D. C.—The jointly administered program of the United States Employment Service and the Farm Security Admir istration of supplying workers for farmers and fruit growers who are short of labor for the harvesting of their war-vital crops, was well under way the middle of September.

Under the program, the first of its kind in the nation's history, the United States Employment Service receives growers' requests for workers and does the recruiting. If the workers have to be brought in from a distance beyond 200 miles, the Farm Security Administration arranges for their transportation, their meals en route to the work area, their housing and, if necessary, sees that they receive medical attention.

The growers agree to pay \$5 a head as their share of the transportation costs and to guarantee employment to the workers for a definite period at the prevailing agricultural wage, which is not to be less than 30c an hour or the piece rate equivalent.

Where migratory camps are not available, the growers furnish housing which has been approved by the FSA.

DELAWARE-The executive committee of the Peninsula Horticultural Society has called off all commercial and fruit and vegetable ex-hibits for the annual meeting to be held December 9, 10 and 11.

In place of the usual three-day meeting, a two-day fruit meeting will be held at Dover on the 9th and 10th and plans are being completed for a one-day vegetable meeting in the lower part of the Peninsula.—T. F. Manns, Sec'y, Newark.

IDAHO-Up to the present time there have been no definite arrangements made for the Idaho Horticultural Society annual meeting. However, if one is held, it will be scheduled for sometime in January or February.—George L. Yost, Sec'y, Emmett.

WEST VIRGINIA-Growers are urged not to

harvest their crop too early in the attempt to "beat the labor short-age." Entomologist Ed age." Entomologist Ed Gould reports that apples are now gaining one per cent a day in size and weight and that two weeks on the tree means about 15% more fruit-better fruit-better colored—larger sized. This means more money and real apples CARROLL R. MILLER



for the public-not immature, bitter, shriveling fruit which will break down in storage quickly, with loss to grower or holder.—Carroll R. Miller, Sec'y, Martinsburg.

KANSAS—Two interesting meetings were recently held by the apple growers in Northeast Kansas, one with the Troy Apple Growers' Association; the other with the Missouri River Apple Growers at St. Joseph, Missouri.

The main topics discussed were labor and truck problems, prices for picking and pack-ing, and disposition of lower grade fruit that formerly went to the vinegar plants. Repre-sentatives from the Federal Food and Drug Department were present at the St. Joseph meeting, and explained the new ruling pro-viding that no decayed or wormy fruit could be used in the production of cider and vinegar AMERICAN FRUIT GROWER

BLACK WALNUT CONTEST

THE Iowa Nut Growers' Association announces that the featured event scheduled for Nov. 12th, the first day of the two-day annual meeting of the Nut frowers' Association, the lowa Horti-cultural Society, and the lowa Fruit Growers' Association, will be a contest for Black Walnuts. The meeting will be held at Iowa State College, Ames, Iowa, on Nov. 12th and 13th.

All Black Walnuts submitted are to be new lowa grown sorts that have never before competed for prizes and any lowans having discovered new sorts are urged to send samples of not less than 25 nuts of each new specimen so as to reach Mr. C. C. Lounsberry, c/o The Horticultural Dept., Iowa State College,

Ames, Iowa, not later than Nov. 10th.
There will be no entry fees and prizes will be awarded for the best specimens.

for interstate shipments.

The harvest of Jonathan and Grimes Golden reached its peak the middle of September with the Jonathan crop heavy despite the freeze damage of 1940.

The yield of Kieffer and Barbar pears is heavy over the state but the peach crop is poor. The vineyards are producing more abundantly than the past season.—Geo. W. Kinkead, Sec'y, Topeka.

IOWA-According to a recent fruit condition report, lowa will produce this year a com-mercial crop estimated in twelve counties around 214,000 bushels of apples. The state as a whole will produce a good deal more than this amount. Last year it was estimated the commercial crop was only 74,000 bushels. 1934-39 average commercial crop was 303,000 bushels.

The crop this year is, as a whole, quite free from worms although in certain orchards there is some scab. This has been an excellent growing year for young trees and a great deal of topworking by budding on Hibernal and Virginia Crab to desirable commercial varieties has been done. Jonathan is the leading variety being used.

It is estimated that lowa will produce this year about 3,300 tons of grapes. Sale for grapes has been somewhat slow compared to that for apples.—R. S. Herrick, Sec'y.

NEW HAMPSHIRE-The harvesting of the McIntosh crop in New Hampshire was certainly full of headaches because of the labor shortage. High school boys and girls, state employees, and industrial workers came to the rescue following an appeal by Governor Robert O. Blood, but in spite of their efforts a good many apples fell to the ground, although the percentage was not large.

The crop on the whole was of very good quality inasmuch as the commercial orchards were well sprayed and scab was well con-trolled. A few of the growers anticipating the labor shortage started the harvest a little early, with the result that some of the crop was in somewhat immature state when harvested, but otherwise the quality was exceptionally good.—Alfred L. French, Sec'y, Concord.

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MONTANA-The Mointosh apple crop in the Bitter Root valley is the poorest this year it has been in many years, and will probably not be more than 25% of normal crop due to frost, hail and severe scab infestation.

In the Clarks Fork valley of eastern Montana, however, there is a very good crop of very excellent quality apples, although this is just a small district.

Bad weather conditions reduced the value of the berry crop to a very considerable extent this year.—George L. Knight, Sec'y, Missoula.

MAINE—The State Pomological Society sponsored three abbreviated meetings in acces-

sible orchards and on successive days in order to minimize travel.

The development of orchard trees by double working has occupied much of our whip grafting in April, budding in late July and through August. This work has pro-July and inrough August. Into work has progressed since the orchard planting of the first Virginia crab and Hibernal apple trees here in 1936 and the first branch budding and graffing done on them in 1937 and 1938.

Many top varieties from that start bore their first fruits in 1941 and in 1942 it has been necessary to thin, prop, and spot pick Mc-Intosh from trees budded in 1938 into branch-Intosh from trees budded in 1938 into branches of Virginia crabs that were planted in 1937. Such trees are bearing up to three bushels, which is more than should be permitted. An interesting comparison is possible with Northern Spy. Some trees of Red Spy were set in 1935, and a few of them have their first scattered fruit this year. Adjacent replants were made in 1936 with Virginia crab topworked to Northern Spy in 1938. These also are bearing light crops in 1942. It seems true that production is hastened rather than rethat production is hastened rather than re-tarded by the double-working process. A bulletin on this way of developing trees is being prepared for publication by the Extension Service, College of Agriculture, University of Maine.—J. H. Waring, Horticulturist, Orono.

RHODE ISLAND—The Rhode Island Fruit Growers' Association, because of gas and rubber shortages, substituted a meeting and clambake at the John M. Dean Estate Orchards, in Meschanicut Park for the usual out of state tour and summer meeting at the Experiment Station. President David Reid proved an excellent host and John Barden produced his usual good bake.

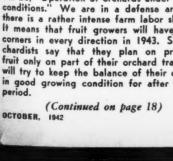
Office workers were organized to help with the fruit harvest and many college boys picked apples during a two weeks' vacation in late September.

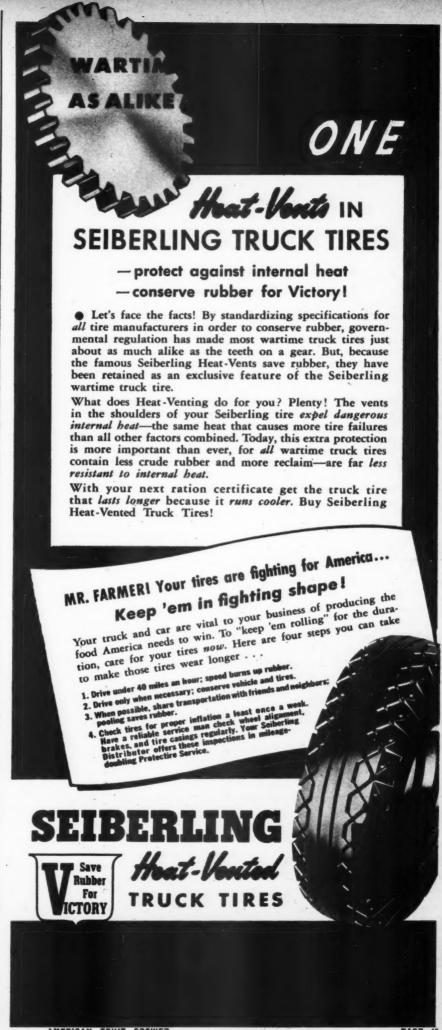
Considerable scab has shown up on Mc-Intosh but, in general, a very good crop is being harvested.—E. P. Christopher, Sec'y,

OHIO-Apple growers are interested in developing improved state-wide apple marketing service. At a state-wide growers meeting unanimous approval was voiced to develop such a program and a committee of 7 appointed to work on plans for an immediate and long-time program. This committee has been meeting weekly and has met with several marketers in the hope of setting up some kind of a selling service during the harvest season. Due to the lateness of the season and need for more financial support to assure the successful operation of a central office, it appears that actual selling will have to be postponed to a later date although there is hope that some selling service may be given from storage later on this crop.

The long-time program involves a plan whereby a central office will operate to service supporting members on marketing information and selling service and assist in developing improved facilities for packing, storage, direct distribution, wider distribution and processing. The interest of growers is growing and contributions to develop this program are being received daily by L. D. Luchsinger, Port Clinton, chairman of the Growers' Committee. The committee is hopeful that at an early date a beginning can be made by furnishing a market information service to supporting members. -Frank H. Beach, Extension Horticulturist, Columbus.

OREGON-The theme of the annual meeting will be, "Operation of orchards under wartime conditions." We are in a defense area, and conditions." We are in a defense area, and there is a rather intense farm labor shortage. If means that fruit growers will have to cut corners in every direction in 1943. Some or-chardists say that they plan on producing fruit only on part of their orchard tracts, but will try to keep the balance of their orchards in good growing condition for after the war





HANDLING APPLES THROUGH STORAGE

By FRANK H. BEACH

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and enroute to market. Care in picking and in every handling operation will reduce this loss. Where fruit is put over mechanical cleaners, washers, graders, and sizers, the entire route through and over the machine and into the bins must be studied to eliminate mechanical injury. Sponge rubber pads and other padding can be more frequently used wherever apples drop or jolt.

It is questionable whether such tender varieties as McIntosh, Northern Spy, and Golden Delicious should be run over a mechanical grader and sizer if these fruits are to be held their full season in storage. They are more satisfactorily handled by hand grading from a moving belt. Other varieties requiring extreme care to prevent bruising, particularly if approaching ripe conditions, are Cortland, Jonathan, Delicious, Stayman, Grimes, Winter Banana and Trans-

Apples which are best adapted to cold storage handling include McIntosh, Cortland, Rhode Island, Greening, Delicious, Jonathan, Golden Delicious and Spy. Jonathan is best stored at temperatures of 34° F.36° F. as at lower temperatures soft scald is very apt to develop, especially if fruit goes into storage warm or has been given delayed cold storage. Wealthy picked at the proper stage of maturity is a satisfactory cold storage variety.

Common storage is not a substitute for cold storage in long keeping quality, but is successfully used for orderly and economical marketing by many growers. It is necessary to watch maturity of each lot and variety carefully and market before buyers discriminate seriously against the condition of the fruit. Varieties which handle most satisfactorily from common storage include Baldwin, Stark, Grimes, Stayman, Rome, York, Ben Davis and the lower grades of fruit that cannot carry cold storage charges. Apples marketed from common storage usually have their satisfactory storage life shortened by 2 or 3 months or more as compared to marketing from cold storage.

In general, smaller sizes of the same variety and grade keep longer than the larger sizes. This is sufficient reason for separating into sizes, such as 2½, 2½, and 3 inches and up for storage purposes. Fruit spots and breakdown are first to occur in the larger fruits and when these are stored separately marketing can be handled to best advantage, selling the larger sizes first.

Ionathan Spot is a varietal weakness which indicates that the fruit is past maturity and entering first stages of breakdown. Similar spot is occasionally found on other varieties such as Wealthy, but is very characteristic of Jonathan. Jonathan sometimes hangs to the tree after full maturity is reached. If allowed to hang too long and attain full high color, the fruit is most susceptible to spot, especially on the larger sizes. Jonathan Spot rarely shows on the fruit at picking time, but if kept at high temperatures, develops quicker on over-ripe fruit after picking. Prompt storage at 34° F.-36° F. is recommended for Jonathan. Moving the larger sizes first reduces loss from spot. Picking relatively early at 140-145 days from bloom will give fruit most resistant to spot developments. It may be desirable to sacrifice somewhat on color to get fruits which are most resistant to Jonathan Spot development.

Bitter Pit is another physiological disease often going under the names of Baldwin Spot and Stippen. Susceptible varieties include Baldwin, Rhode Island Greening, Grimes, Stark Spy and occasionally large Stayman. The causes of Bitter Pit are not all well understood. It is usually worse on large apples from young trees or on trees which have been forced, particularly in seasons when soil moisture conditions have fluctuated widely. Frequently, limby crops are more susceptible than uniform crops of medium size fruit. Bitter Pit often develops in storage. If the trouble is noticed at harvest, fruit is not suitable for late keeping. Larger sizes should be worked off first. Premature ripening following drouthy conditions forcing rather early harvesting may be a factor.

Cultural methods that promote regular, uniform cropping, with uniform growth throughout the season, reduce losses from Bitter Pit.

Water Core is another physiological disease which seems to be associated with intense heat and sunlight as apples approach maturity. Susceptible varieties include Transparent, Fall Pippin, King and occasionally it is found on a rather wide variety list. Mild cases of Water Core frequently disappear in storage. Where Water Core is serious and visible at harvest, fruit is not adapted to storage handling.

Internal breakdown is associated with over-mature apples where growth has been forced late in the season. At the Ohio Experiment Station, Wooster, studies by Gourley have shown

that it is not induced by nitrogen fertilization. Among very susceptible varieties are Stayman and its red sports and Rhode Island Greening. Close attention to desirable harvest dates, proper storage, and the selling of large sizes first, reduce losses from Internal Breakdown. Limby, light crops frequently have earlier maturity and are more subject to internal breakdown.

Another type of breakdown is "soggy" breakdown. Grimes and Ionathan are quite susceptible and it is also found on Golden Delicious. Wealthy, Rome and Winter Banana Varieties which seem resistant are Winesap, Stayman, Delicious, York, Baldwin, Rhode Island Greening, McIntosh, Ben Davis and Mammoth Black Twig. Experimental work indicates that soggy breakdown is caused by storing at a temperature too low for the apple to complete its normal ripening process in storage, Temperatures from 30° F, to 32° F are associated with the injury and when the storage temperature is raised to 36°, the injury does not develop. Affected apples have a dull. spongy appearance and in severe cases, the flesh turns soft and brown.

Penicillium, Soft Rot or Blue Mold is a disease which gains entrance through skin punctures. Prompt storage at around 32° tends to hold the disease under control. It does not develop very rapidly until storage temperatures get above 36°. Paper wraps confine the disease to affected apples and prevent its spread to a considerable extent through the package. Careful handling from tree to storage to prevent bruises, cuts and stem punctures are preventive measures.

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Scald is primarily a storage disease which develops most on the under-colored surface of susceptible varieties, causing skin browning. Immature fruit is most susceptible. Varieties particularly susceptible include Rhode Island Greening, Stayman, Rome, Mammoth Black Twig, Wagener, Baldwin, Grimes, and York. Varieties are made more resistant when given two or more pickings to get fruit off the trees as it is properly matured, carrying the proper amount of color. Prompt cold storage at a temperature 35° to 36° has given less scald than where lower cold storage temperatures are used. Adequate ventilation in common storage minimizes losses. Storage in tight containers increases losses.

Losses are reduced in cold storage by the use of ½ pound to the bushel of shredded oil paper, uniformly distributed through the package, or using oil paper apple wraps. Green paper is most decorative for the yellow varieties and purple for the red varieties. Oil paper should carry from

(Continued on page 21)

OCTOBER, 1942

PAGE I

APPLE MARKET

(Continued from page 12)

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lated on the program of increased sales pressure which they have asked retailers to make during the early part of the apple marketing season. With strong consumer purchasing power, scarcity of satisfactory labor, and shortage of storage space, it seems only reasonable that those growers who can prepare and store a high grade of fruit of varieties desired by consumers are likely to receive good prices for such fruit if they place it in the markets which desire that quality, and are willing and able to pay for it.

While this is a year when quality fruit will bring good prices, processing outlets may offer a more attractive net return than fresh markets for fruit of lower grades and the less desirable varieties. Producers of the latter quality are fortunate to have such good processing outlets and prices this season and they will do well to consider them carefully if processing facilities are readily available to their orchards.

The most disturbing factor which the industry may face is the possible establishment of ceiling prices contemplated in legislation before Congress at the time this is written. The disruption of distribution which has resulted from the administration of ceiling prices for meat should warn the fruit and vegetable industry of the confusion which may result if an attempt is made to apply such ceiling to other perishable commodities. Unless exemption from such ceiling prices can be secured, all of the favorable factors now present may be nullified by such governmental regulation of prices.

The weakness in the apple market which developed as soon as legislation concerning price ceilings began is an indication of the importance of this factor in the final outcome of the season for growers.

A WARTIME GUIDE TO BETTER HOMES

"WHEREVER your home may be and whatever its role in the war effort, it must survive as a symbol of the very things we are fighting to preserve . . . our cherished right to enjoy, as free men, the fullest measure of life's security and contentment. Today, every home . . must serve as an arsenal of moral, of the spirit which will inspire the nation to . and so, it becomes the responsibility of each of us to protect and fortify our homes so that they can better weather the storms of today . . . and remain standing, firm and strong, for the day when victory is finally ours.

These are the sincere thoughts of the Celotex Corporation with which they prepared a "Wartime Guide to Better Homes," and the Celotex Corporation, for almost a quarter of a century one of the outstanding manufacturers of quality building materials will be pleased to mail you a copy upon request. OCTOBER, 1942



TWICE AS MUCH goes under the FIGHTER'S BELT

S FAR as the farmer is concerned, a man in uniform is a far better A customer than a man in "civvies."

The soldier eats, for example, more than twice as much meat as the average for folks at home. The figures are: 153 pounds of meat a year for the average civilian—365 pounds for the fighting man.

It's almost the same with fruits and vegetables. The folks at home average about 500 pounds. But the man in uniform accounts for over 800 pounds per man.

Moving these foodstuffs quickly and properly is another of the railroads' wartime responsibilities—for food is an important part of the million and a quarter tons of freight the railroads move a mile every minute of the day and night.

It accounts for many of the cars in the loaded freight trains the railroads are sending off at five-second intervals.

To carry all the materials the railroads are asked to handle cars cannot be allowed to stand idle.

And you can help to keep them moving. Just remember this: load them as soon as they arrive—and load them to the limit.

Then it will be up to the railroads to speed them on their way-to get the double ration under the fighters' belts-and to get the usual food supplies to the folks at home.

ASSOCIATION OF



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AMERICAN FRUIT GROWER







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STATE NEWS

(Continued from page 15)

At the Western Nut Growers' Association meeting the important discussion will be, "Fitting orchard operations to wartime conditions.

E. Riddell Lage, Hood River, Oregon, is president of the Oregon State Horticultural Society and Roy Ward, Portland, Oregon, president of the Western Nut Growers' Association .- Q. T. McWhorter, Sec'y-treas., Cor-

NEW JERSEY-There will be no exhibits due to the lack of space for that purpose at the annual meeting of the State Horticultural Society to be held on December 1, 2, and 3. The meetings will be about the same as in pre-vious years, other than for that.—Arthur J. Farley, Sec'y, New Brunswick.

AH! SHUCKS!

You've had a bad day today; It's been terrifically hot. You never did what you should And what you did you ought not.

You're on the last tree for the day; It has apples by the ton.

You've been thinning it at least an hour

And you're anxious to get done.

Carefully you do each limb; You set your ladder again You haven't done a tree so well Since you can't remember when.

Ah! At last you've finished your task And a good job it is too. Here comes the foreman to check up. It's as good as he could do.

You stand, expecting a little praise But suddenly you see him scowl For right in front of his nose Is a limb you missed-somehow!

By Mary Virginia Dean.

Mary Virginia Dean, the author of this poem, is a major in Horticultural Journalism at Ohio State University and the daughter of L. G. Dean, Manager of the Grand River Orchards at Geneva, Ohio.

COMING EVENTS

(Continued from page 6)

Jan. 12-14—Pennsylvania State Horticulture Association annual meeting, Harrisburg. J. U. Ruef, Sec'y, State College.

Jan. 22—The annual meeting of the inne-sota Fruit Growers' Association ill be held with the Minnesota State Horticul-tural Society at University Farm, St. Paul, during the Farm and Home Week, January 18 to 23. The exact date for the meeting is tentative, but it is expected to be held on Friday, January 22.—J. D. Winter, Sec'y, Mound.

Jan. 26-28—Annual meeting of the Ohio State Horticultural Society will probably be held in connection with Farmers' Week, Ohio State University. The exact dates will be announced later.-Frank H. Beach, Extension, Horticulturist, Colum-

Feb. 10-11-West Virginia State Horticultural Society annual meeting, Martins-burg.—Carroll R. Miller; Sec'y, Martins-

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Strawberry Plants

Millions of Yellow Free Blakemore, Aroma, and Missionary. All other leading varieties.

All plants New Ground Grown and have passed inspection. Satisfaction Guarantee

Birchwood, Tenn. John Lightfoot,

STATEMENT OF THE OWNERSHIP, MANAGEMENT CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

OF AMERICAN FRUIT GROWER, published monthly at Cleveland, Ohio, for October, 1942. STATE OF OHIO COUNTY OF CUYAHOGA

COUNTY OF CUVAHOGA | 88.

Refore me, a Notary Public in and for the State and county aforecasid, personally appeared E. G. K. Meleiker, who, having been duly sworm according to law elecose and says that he is the Business Manager of the AMERICAN FRUIT GROWER and that the following is, to the best of his knowledge and belief, a two statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above capiton, retained to the capital shown in the above capiton, retained to the capital shown in the above capiton, retained to the capital shown in the above capiton, retained to the capital shown in the above capiton, retained to the capital shown in the shown in the

coltor, managing editor, and business managers sw:
Publisher, American Fruit Grower Publishing Conpany, 1370 Ontario St., Cleveland, Ohio; Editor, J. R.
Gourley, 1370 Ontario St., Cleveland, Ohio; Managing
Editor, Dean Halliday, 1370 Ontario St., Cleveland,
Ohio; Husiness Manager, E. G. K., Meister, 1370 Ontario St., Cleveland, Ohio.

tario St., Cleveland, Ohio.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stated and also immediately thereunder the names and addresses of stated and also immediately thereunder the names and addresses of the individual owners must be given. If owned by a farm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.

American Fruit Grower Publishing Company, 1300 Ontario St., Cleveland, Ohio; E. G. K. Meister, 1370 Ontario St., Cleveland, Ohio; R. B. Campbell, Richmond, Virginia.

Ontario St., Cleveland, Ohio; R. B. Campbell, Richmond, Virginia.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cust emore of total amount of bonds, mortgages, or New St. Company, and the securities are: (If there are none, so state.) News.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holder sers, if any, contain not only the list of security holder sers, if any, contain not only the list of security holder sers, if any, contain not only the list of security holder or security holder appears upon the books of the company, but also, in cases where the stockholder or security holders appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraph's contain statements embracing affants's full knowledge and hellef as to the circumstances and conditions under which stockholders and securities in a capacity elsewhen the said stock, bonds or other securities in a capacity direction than that of a bons fide owner; and this affairstion, er corporation has any interest in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this multi-series of the company and the company and the said stock, bends, or other securities than as so stated by him.

5. That the average number of copies of so of this publication sold or distributed thromalis or oherwise, to paid subscribers dutwelve months preceding the date shown above.

(This information is required from daily publication of the control of the contro

E. G. K. MEISTER, Business Manager.

Sworn to and subscribed before me this 14th da ptember, 1942. (Seal) H. Willkom, Notary Public. (My commission expires November 13, 1944.)

State

R. F. D.

APPLE PLANTING TRENDS

(Continued from page 10)

they begin to pool their information on how to grow it, and they tend to adopt practices without which the variety would fail. This is what has happened with the McIntosh in the Northeast, in part, and the Delicious in other sections.

Further, however, the American public for some unexplained reason prefers a bland fruit. Most of us have not realized this, but that outsiders do is indicated by the recent contribution to the Journal of the Royal Horticultural Society initialed "A. D. H." and which is probably from the pen of Sir Daniel Hall, who died July 5.

He says "The English people are almost alone in making a clear-cut division between dessert and cooking apples . . . Americans recognize only one kind of apple, sweet and soft as a rule." And if one will stop and think for a moment, he will find that this is true. We grow no sharp cider apples, no "Wardens" or baking pears, no apple variety solely for cooking and which is unusable except when cooked. Further, our varieties of peaches, cherries, pears, plums, grapes, and even citrus, all lean towards the milder, sweeter side. It seems to be a national characteris-

These, then, are the trends in a broad general sort of way, which seem logical and fairly explainable at the moment but which a new set of conditions in a world changing as rapidly as this one, may easily shift or even reverse. None of the changes, however, involve any great shift or severe dislocation, but rather an orderly expansion here and an orderly withdrawal there.

NEW RED RASPBERRY

A new variety of red raspberry originated at the State Experiment Station, Geneva, N. Y., from a cross between Lloyd George and Newburgh, has been named the Milton.

The berries of Milton are large and resemble those of Taylor in size and shape. They are attractive, bright red in color, firm, not crumbling, mild subacid in flavor, and of good quality, being equal or superior to Taylor in that respect. Milton is a late variety, ripening two or three days later than Taylor or Latham. Milton compares favorably with other red raspberry varieties deemed suitable for freezing.

Professor G. L. Slate, Station small fruit specialist, reports that it appears to be superior to Taylor and Latham in not taking mosaic, and is hardier than Marcy and should be tested in a limited way until its merits have been determined in comparison with other standard varieties.



MORALE IS A LOT OF LITTLE THINGS

In a minute "the Missus" will be chiding you about that "filthy" pipe she just laid out for you.

And you will have hid the smudged side of the towel so she won't see it (she already has) and be telling her she "nags" you. Then you'll make faces at each other and laugh, and sit down for a little chat while you tell the friendly sun good-by, the way happy married folks the country over do.

You don't call all this "morale," and she doesn't. But both of you know that morale is just a lot of little things like these—things we understand and tolerate and even approve in the other fellow.



One of the little things many Americans want as a right is a cold and relaxing glass of beer when the day's work is done. It doesn't have to be beer—it can be lemonade or buttermilk.

A small thing, surely—not of crucial importance to any of us. And yet—morale is a lot of little things like this. Little things that help to lift the spirits, keep up the courage.

And, after all, aren't they among the things we fight for?

OPPORTUNITY ADS

Only 15c a Word—CASH WITH ORDER Count each initial and whole number at one word. ADDRESS: AMERICAN FRUIT GROWER, 1370 Ontario Street, Cleve

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COLONIAL CHICKS. WORLD'S LARGEST PRODUC-tion means lowest prices. Leading breeds. Catalog Free. COLONIAL POULTRY FARMS, Pleasant Hill, Mo. Marion, Ohio.

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BEAUTIFUL HOSIERY FOR BEAUTIFUL LEGS—45c (3 pairs—\$1.35). Two pairs (Fulfashioned)—\$1.45. "DIREX" AF346W. Broad, Savannah, Georgia.

FOR SALE

A MONEY MAKER, VANDERVORT FRUIT FARM, 92 acres, marketed 6000 bushels Apples last year, 40 acres, Orchard, fine condition, three miles from Jamestown, Greene County, Ohio. Beautiful two story seven room frame house "Modern," good barns, storage buildings, electricity, well fenced, land good, can be bought at a reasonable price. Write or call PRUGH REALTY AGENCY, Xenia, Ohio. Phone No. 861.

FOR SALE: FARQUHAR AND MT. GILEAD CIDER Pressee, all sizes, new and rebuilt. Supplies. W. G. RUNKLES MACHINERY COMPANY, 185 Oakland St., Trenton, N. J.

WHISKY BARRELS—\$2.50 EACH, 5-\$12.00, 10-\$23.00, 20-\$44.00, 50-\$105.00. Other Bargains, Glass Gallon Jugs, Bushel Hampers, Cotton Duck Canvass, Sugar Sacks. SHO-OFF ORCHARDS PRODUCTS CO., Peoria, III.

HELP WANTED

STEADY WORK—GOOD PAY. RELIABLE MAN OR woman wanted to call on farmers. No experience required. Pleasant work. Home every night. Make up to \$15.00 in a day. Wonderful new proposition. Particulars free. McNESS COMPANY, Dept. 621, Freeport, Illinois. WANTED: MAN FOR PROFITABLE RAWLEIGH Route. Must be satisfied with good living at start. Write RAWLEIGH'S, Dept. J-101-AFG, Freeport, Ill.

NURSERY STOCK

PROLONG THE LIFE OF YOUR NEW ORCHARD 15 years by planting our Super Hardy Northern-rooted fruit trees. Can also supply Hibernal and Virginia for topworking, Free catalog. ANDREWS NURSERY, Faribault, Minnesota.

STRAWBERRY PLANTS, BOYSENBERRIES, FRUIT trees, etc. Write for price list. CHATTANOOGANURSERIES, Chattanooga, Tenn.

TT'S NOT TOO EARLY TO SEND IN YOUR OR DER'S for that Victory Orchard. This is our 60th year of growing Peaches, Pears, Plums, Persimmons, Figs, Grapes and Pecans specially for the South. December or January planting recommended. Write for quotations and our catalog illustrated in color. GLEN SAINT MARY NURSERIES COMPANY, Box 42, Glen Saint Mary, Fla.

FRUIT TREES, SEEDLINGS AND ROOT GRAFTS AT Bargain Prices. E. W. JONES, Woodlawn, Virginia.

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WALNUT CRACKER

LATEST WALNUT CRACKER DIRECT FROM MANU-facturer. BENN THOMPSON, Harrisonburg, Virginia.

WANTED

WANTED ORIGINAL SONG POEMS, FIVE STAR MUSIC MASTERS, 716 Beacon Building, Boston, Mass, WANTED TO HEAR FROM OWNER OF FARM OR unimproved land for sale. WM. HAALEY, Baldwin, Wis. TO BUY FIVE THOUSAND BUSHELS OR MORE good orchard run apples. State varieties and lowest prices. CHAS. THOMASON, Star-Route, Ensiey, Alabama.



QUICK PROFITS-THE PATRIOTIC WAY

(Continued from page 11)

does, however, offer opportunity to rally to Uncle Sam's support with quick production of nutritious fruits in addition to the tree fruits a grower may be producing from long-established trees. And it does offer definite opportunities for quick cash crops and quick profits.

As every practical fruit grower will readily understand, there is more to this plan than just setting out bramble stock or plants of the small fruits. There are diseases and insect pests to cope with, as with tree fruits; there is also the labor problem. Many small fruits require mulching and special pruning; and in most cases the fruit of these sorts is highly perishable. As with tree fruits, however, facts are available which will guide careful growers in the culture of these fruits.

Most state experiment stations and colleges have carried on work with small-fruits that indicates their performance and best method of production and marketing for every state in the country. Wise study and common sense application of these facts to individual situations should result in profitable growing of these more or less specialized fruits.

As every grower of tree-fruits will understand, summer and winter temperatures, rainfall and prevalence of diseases and insects are important in determining the varieties of small fruits that can be grown in the different sections of the country.

Generally speaking growers located in the Northeastern states; Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut and New York, and those in the North Central States; Michigan, Wisconsin, Minnesota, and Iowa, can safely diversify with strawberries, raspberries, blackberries and grapes. Under certain soil conditions blueberries may be grown. Currants and gooseberries, which succeed well in all parts of the region, may be planted wherever quarantine regulations permit, that is, where white pines are not important.

Strawberries are adapted to the greatest number of locations and conditions in this region. They are the first fruit to ripen, are of fine flavor, and, as the U.S. Department of Agriculture points out, are the highest in Vitamin C content of any fruits that can be grown in this region.

Red and purple raspberries can be grown in all districts of this region, and black raspberries except in northern Minnesota. Usually it is best not to attempt to grow both red and black varieties of raspberries together, for cultivated and wild red raspberries often have a virus disease that spreads to black raspberries and quickly kills them. Either of the red raspberries

Taylor or Latham (not both) should be grown in such states as Maine, Vermont, New Hampshire, Massachusetts and New York.

In the East Central and Middle Atlantic states; Pennsylvania, Maryland. Virginia, West Virginia, Kentucky, Ohio, Indiana, Illinois and Missouri a grower of tree fruit could safely contemplate strawberries, raspberries, blackberries, grapes, and, under certain conditions, blueberries, in a planting program of small fruits.

In the Southeastern and Central Southern States; North Carolina, South Carolina, Georgia, Florida, Tennessee, Alabama, Mississippi, Arkansas, and Louisiana, diversification can be practiced with muscadine grapes, strawberries, dewberries, blueberries, (rabbit eye varieties) blackberries, bunch (American) grapes, raspberries.

In the Central Southwestern States: Kansas, Oklahoma, Texas, Colorado and New Mexico, a small-fruits planting program could consider muscadine grapes, dewberries, strawberries, blackberries, and bunch grapes,

In the Northern Great Plains, Northern Mountain and Intermountain States; North Dakota; South Dakota, Nebraska, Montana, Idaho, Utah and Nevada, a small-fruits program can include currants, (where quarantine regulations permit) strawberries, gooseberries (where quarantine regulations permit), grapes and raspberries. Certain native fruits, including buffaloberries, Juneberries (serviceberries) and American Cranberry-bush, may be of value in parts of this region. Currants and gooseberries succeed and are among the most valuable fruits wherever the moisture supply is sufficient. Only the Beta grape is hardy in most of this region. Some other varieties may be grown in eastern Nebraska near the Missouri River and under irrigation at the lower elevations in Utah and Idaho.

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In the Pacific Coast States; Washington, Oregon, California, and in Arizona, a small-fruits program can include grapes, strawberries, Young or Boysen dewberries, and red raspberries.

Besides the economic side of this trend toward many kinds of fruit on the nation's fruit farms, there is the lure of setting new stock, of caring for and working with plants that every real fruit grower cherishes. And in these times, in addition to quick profits, this type of program will bring the satisfaction of doing one's utmost in this time of emergency to provide fruits needed to help maintain the health and strength of the nation to the end that Victory will be ours.

AMERICAN FRUIT GROWER

OCTOBER. 1947



RUBBER STAMPS

BOOKLETS

RUBBER STAMPS .

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Growers and packers find the Portable Warehouse stamps and sponge pads which are manufactured by the Rivet-O Manufac-turning Company of Orange, Massachusetts, efficient time savers.



than honey and because of this sweetness and because it has no pronounced flavor the sirup may be adapted to the same uses for which honey is satisfactory. is satisfactory.

However, the limiting item for going ahead into the production of this sirup is the scarcity of vacuum evaporators. New ones cannot be bought and it will be necessary

It contains the same sugars as honey but in

different amounts so that it is even sweeter

that evaporators used for other products, such as milk, fruit juices, and tomatoes, be loaned to companies interested in going into the production of apple sirup.

Since there is an urgent need for every possible source of sugar, and the apple is one of them, write the U.S.D.A. Laboratory to day if you have equipment you can loan for this important apple by-prodthe head of Cutaway Harrow and Merton I. Vestal, former production manager of the Old Colony Machine Works Company of Fall River, Mass., is production manager.

BOOKLETS •

The Ethyl Corporation, Chrysler Bldg., New York, N. Y., announces a revised edi-tion of the booklet "Wartime Tractor." The booklet contains 32 illustrated preventive maintenance and operating tips for tractors, a complete repair and maintenance check list and a tractor expense record.

"Your Farm Equipment—Take Care of It and Make It Do"—is the title of a comprehensive booklet offered by International Harvester Company, 180 N. Michigan Ave., Chicago, Illinois.

An attractive booklet describing the highlights of its 25-minute motion picture, "Keep 'Em Rolling," showing the importance of rubber in the nation's war effort has just been published by the B. F. Goodrich Company, Akron, Ohio, and is available upon

The U.S.D.A., Bureau of Plant Industry, is offering a valuable booklet entitled, "Plant-Growth Regulators" to our readers. Write to the Superintendent of Documents and enclose 20c for your copy.

The portable pad is of sponge rubber and designed for operators to carry in one hand while carrying stamp in other for rapid marking of boxes, baskets, barrels, etc. There's also a portable wrist model which can be strapped to the wrist and worn all day without in both hands free. without inconvenience, thus leaving

The Rivet-O Manufacturing Company also manufactures the Special Fruit Grow-ers' Logotype "Speed-Mo" rubber stamp which is complete in one unit, having interchangeable logotypes for size, grade and brand

CHEMICAL DEVELOPMENTS •

At the opening session of the American Chemical Society meeting in Buffalo on Sept. 7, Dr. Charles M. A. Stine, a vice president of E. I. du Pont de Nemours & Company and its advisor on research and development, declared that under the pressures of war, chemical developments are proceeding so rapidly that "the world of 1940 has already become an antiquity"... "The inconceivables of only two years ago are today's realities."

Dr. Stine predicts . . glass that is unbreakable and glass that will float . . . wood that won't burn . . . shoes that contain no leather . . . window screens that contain no wire . . . machinery bearings that contain no metal . . . and that the highpressure synthesis of ammonia, one of the major chemical exploits of the century, will supply farmers with so large an amount of fertilizer chemicals that the basic trends of

agriculture may be changed.

To quote directly . . . "Today we produce to destroy, but tomorrow we will produce to build, and we will continue to invent and thus to multiply our possessions. We will have at our command ten, fifty, a hundred times what we had before, chiefly of new materials. That prospect is as certain as tomorrow's dawn."

APPLE SIRUP .

The Eastern Regional Research Laboratory of the U.S.D.A., located in Philadelphia, announces the development of a new apple product in the form of a bland, very sweet sirup.

It is light amber in color and possesses no distinctive flavor, not even apple flavor. OCTOBER, 1942



CUTAWAY HARROW •

One of the oldest farm implement plants in the country, The Cutaway Harrow Company of Higganum, Connecticut, has been acquired by Orkil, Inc., of Hartford, and overnight, part of its capacity has been converted into "beating plowshares into swords" to help further our war efforts.

The concern will, of course, continue to produce harrows within the limits of the government restrictions and will maintain a stock of harrow parts ready to service old customers at a moments notice.

The Cutaway Harrow Company was established by the late George M. Clark, known as the "grass king" because of the phenomenal yields of hay produced on his

Orrin P. Kilbourn, president of Orkil, Inc., and owner of one of the largest apple orchards in southern New England, is now

ONE GOOD TURN DESERVES ANOTHER

On this page each month AMERI-CAN FRUIT GROWER presents new products, services and bulletins of in-terest to growers. We do this in an effort to be of real help to our readers. Since "one good turn deserves another" won't you mention the name of this magezine when you write to these manufacturers and companies for further information.

HANDLING APPLES

(Continued from page 16)

15 to 20 percent mineral oil which acts as an absorbent of the accumulated waste gases from respiring fruit. These gases are responsible for the killing of surface tissue and the development of scald.

Soft Scald or "Deep" Scald is a disease which develops at low temperatures in cold storage. Jonathan is our most susceptible variety and considerable losses have been taken in some seasons with Rome Beauty. The factors which create susceptibility are rather complicated and rather difficult to control. However, since. the disease develops in cold storage at temperatures around 32° and has not developed at somewhat higher temperatures, it is recommended that susceptible varieties such as Jonathan and Rome Beauty be stored at a temperature not lower than 34° and preferably about 36°. Some cold storage companies offer special temperature rooms for Jonathan.

Fruit which is given delayed storage seems to be more susceptible than apples given prompt storage. Apples going into low temperature cold storage rooms at high temperatures in tightly sealed containers have given greatest losses from soft scald. is especially risky when fully mature high colored, susceptible varieties are given this handling. This disease develops curious patterns of soft brown flesh extending from the skin rather deep into the apple. After exposure to warm air the scalded areas take on a light brown color and the apples have the appearance of having been rolled around on a hot griddle.

WORTH

FIRST STEPS IN FRUIT GROWING

AIDS FOR PLANTING

WHEN A BLUEBERRY IS A HUCKLEBERRY

YEAR after year at this season the fruit specialists at the state experiment station at Geneva are confronted with the question as to the difference between a huckleberry and a blueberry, and once again they offer the "crackle" test as an unfailing answer. "If it crackles when you eat it, it's a huckleberry," they say.

Prof. G. L. Slate, small fruit specialist

Prof. G. L. Slate, small fruit specialist at Geneva says that the huckleberry is distinguished from the blueberry by having 10 comparatively large seeds, each of which is surrounded by a bony covering like a minute peach pit which crackles between the teeth. The blueberry, on the other hand, has many seeds which are not noticeable when the berry is eaten.

Also, the undersides of huckleberry leaves are sprinkled with resinous dots which are absent on blueberry foliage.

The huckleberry is not highly esteemed for its fruit, although it is occasionally used. There are many species of blueberries, but the improved cultivated varieties that are now being grown commercially are nearly all derived from the highbush blueberry.

MAKE THEM LAST!

SPONGES, now a scarce article, will last longer if washed in warm soap and water after every use. The soap must be rinsed out well, and the sponges squeezed, not twisted. Natural sponges should be dried in the shade, hanging them by means of a cord running through the holes. Rubber sponges must be stored away from heat, light and metals, especially copper.

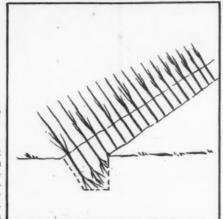
FARM SAFETY

MORE accidents happen to farm people than to any other class of workers, Department of Agriculture studies show, and in wartime, accident rates usually rise sharply. Fruit growers are urged to strive for a drop in this accident rate, for one day lost is that much comfort to the enemy.

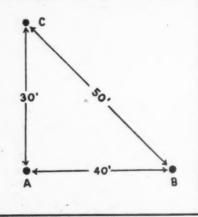
The tractor is the worst offender, causing 29 out of every 100 reported accidents and growers are cautioned not to overwork during the harvest seasons for fatigue breeds accidents.

RECOMMENDED READING

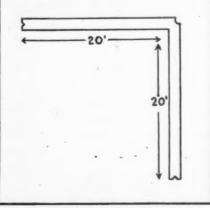
THE United States Department of Agriculture, Washington, D. C., has just released bulletins for The Home Fruit Garden for the following agricultural areas: Leaflet 218, East Central and Middle Atlantic States. Leaflet 219, Southeastern and Central Southern States. Leaflet 221, Central Southwestern States. Leaflet 222, Northern Great Plains, Northern Mountain, and Intermountain States. Leaflet 224, Pacific Coast States and Arizona. Leaflet 227, Northeastern and North Central States.



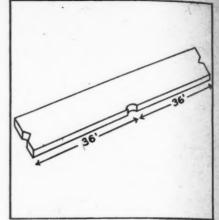
Nursery stock should be heeled in as shown above if young trees will not be planted immediately. This keeps stock from drying out.



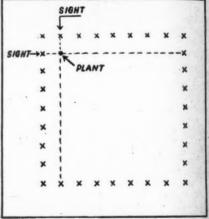
A triangle 3x4x5 or 30x40x50 will always be a right triangle. This principle can be used in planting for locating a new row of trees.



For locating trees on the square system this device is helpful. By laying this against two stakes on the base line third tree is located.



A planting board is useful to make sure that trees are planted exactly in the right spot. It is made from a board about five inches wide.



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After the outside rows have been located, three men are needed to establish the inside rows by sighting. Two men sight while the third locates the stake.



After the young apple tree has been planted it should be cut back as shown in the illustration above. It is now ready to grow into a mature tree.

OR a well laid out, good looking orchard, trees should be planted in lines as straight as possible, except, of course, where they will be planted on the contour. The beginner might believe at first thought that this is an easy task but a few attempts will convince him otherwise. A number of devices have been developed which help the orchardist to establish straight lines without the use of complicated and expensive surveying instruments.

straight lines without the use of complicated and expensive surveying instruments.

The planting board is probably most widely used. When using it the middle notch is set against the tree stake and temporary stakes are placed at the two end notches. When the tree stake is removed to dig the hole, the exact position for the tree can be easily found by replacing the planting board with the two end stakes as guides. The middle notch will locate the tree.



The first American-made Diesel engine was built to create more and better power for the brewing of Budweiser. • Adolphus Busch, founder of Anheuser-Busch, acquired the first rights to manufacture this revolutionary engine in America and thus started our great Diesel industry on its way.

He also founded Busch-Sulzer Bros.-Diesel Engine Company which made submarine engines in World War I, and today holds the Navy E Award for excellence in the production of Navy ordnance and Diesel engines essential to the war effort.

Year after year, we have striven with research and resources to better the methods and facilities for brewing Budweiser. To do this, a laboratory specializing in ferment-ology and nutrition was necessary. Discoveries made in the laboratory and in the plant have led to the development of products contributing to human necessity and progress. Some of these products would appear to have only a remote relationship to brewing, yet, they are the result of scientific research into many allied fields.

Endless research in making the world's leading beer has led to other products

VITAMINS, B COMPLEX—Our plant is one of the world's largest sources for manufacturers of pharmaceutical and food products.

VITAMIN D—Anheuser-Busch produces enough of the basic material for Vitamin D to supply the entire American market.

BAKER'S YEAST—We are one of America's biggest suppliers of standard and enriched yeasts and malt syrup used to make bread.

CORN SYRUP—many millions of pounds annually for America's candy industry.

SYRUPS—for food, table and confectionery uses and special syrups for medicinal purposes.

STARCH—for food, textile, paper and other industries—millions of pounds annually.

VITAMINS FOR LIVESTOCK—We are America's biggest supplier of yeast vitamins used to fortify animal feeds.

REFRIGERATING EQUIPMENT—for retailers of frozen foods and ice cream the country over. This division is now working all-out on glider wing and fuselage assemblies for our Armed Forces.



Budweiser

ANHEUSER-BUSCH • • SAINT LOUIS



tradition by mammoth size, rich col or, extra rich flavor, and tempting juicy freshness.

horticultural wiz-ard—whose crea-tions are propa-Not fruit trees that require years of patient waiting—but young-bear-ing fruits discovered and selected by our scientific research and then pro-

duced by our special grafting method and controlled propagation, until the earth gives forth its treasures years earlier.

Not the delicate trees that grow in only Not the delicate trees that grow in only special places—but trees propagated so they thrive almost everywhere that farm crops grow. These trees, exclusive strains and varieties, many awarded U. S. patents and trade-marks, are developed with super-heavy root structures which give them "years" head start. Each Stark tree is "fattened" in specially selected soils before it is dug, so it is loaded with rich plant food elements that practically eliminate set-back from trans planting.

nificent Art Color Book Tells How Easy!

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While national health and defense author-

magnificent new Starking (Trade-Mark)—king of all red apples—red-all-over weeks before Delicious! Golden Delicious (Trade-Mark), glorious new flavor queen of all gold-en apples — unequalled in richest, juiciest flavor, supreme in young and heavy-bearing! The new Scarlet Staymared—Stark's U.S. Patent—blazing triple red Stayman Winesan

a solid, blazing triple-red Stayman Winesap —coloring as much as 30 days before and keeps later than the old Stayman! Montearly Cherries, earliest of all sour cherries: Montlate, latest of all Montmorencies (Both Stark U. S. Pat.)—extend profit-picking cherry season 6 weeks! All exclusive new varieties sold ONLY by STARK. Also hundreds of other famous Stark fruit trees all true-to-name and true to strain, and safe arrival guaranteed.

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